Ejercicio 02

TASA MARGINAL de Sustitución = $\frac{Mu_x}{Mu_y}$;

$Mu_x = \frac{\partial u}{\partial x} = y$; $Mu_y = \frac{\partial u}{\partial y} = x$

$TMS = \frac{y}{x} = \frac{P_x}{P_y} = \frac{50}{50} = 1 \rightarrow y = x \quad \ldots (I)$

"Igualamos TMS a la razón de precios"

$y = x = k$

Restricción Presupuestaria

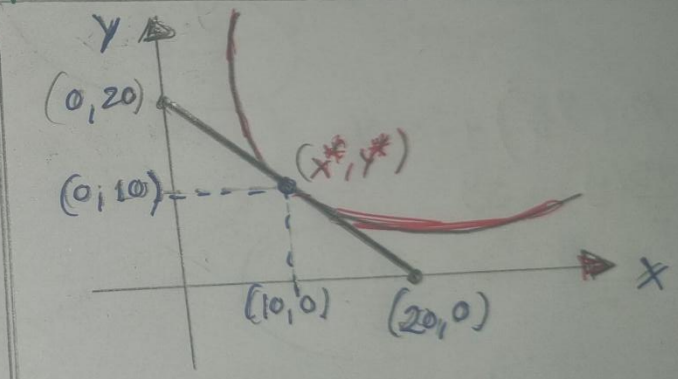
$M = P_x X + P_y Y$

Reemplazando los datos

$1000 = 50X + 50y$

$20 = x + y$

$\boxed{y = 20 - x}$



Reemplazar en (I)

$1k + 1k = 20 \rightarrow k = 10$

$x^* = 10$; $y^* = 10$

Curva precio – consumo de "x" (variando P_x)

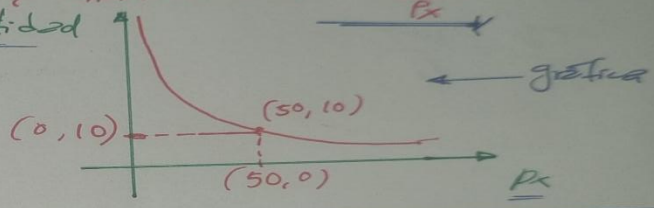
$M = 1000$
$P_y = 50$
P_x variable

Maximizamos: $U = xy \rightarrow P_x X + 50y = 1000$

$\frac{Mu_x}{Mu_y} = \frac{y}{x} = \frac{P_x}{50} \rightarrow y = \frac{P_x}{50} x$

Sustituimos en la restricción $\rightarrow P_x \cdot X + 50\left(\frac{P_x}{50} x\right) = 1000 \Rightarrow 2P_x \cdot X = 1000 \Rightarrow x = \frac{500}{P_x}$

$y = \frac{500}{50} = \frac{10 P_x}{P_x} = 10$

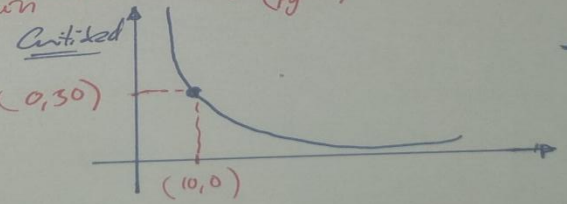


← gráfica

Curva Precio – Consumo de "y" (variando P_y) ; $M = 1000$; $P_x = 50$ – P_y variable

$\frac{Mu_x}{Mu_y} = \frac{y}{x} = \frac{P_x}{P_y} \rightarrow y = \frac{P_x}{P_y} \cdot X$ Sustituimos en restricción $\rightarrow 50X + P_y\left(\frac{50}{P_y} X\right) = 1000 \rightarrow 2 \cdot 50X = 100 \rightarrow X = 10$

$y = \frac{50}{P_y} \cdot 10 \rightarrow y = \frac{500}{P_y}$

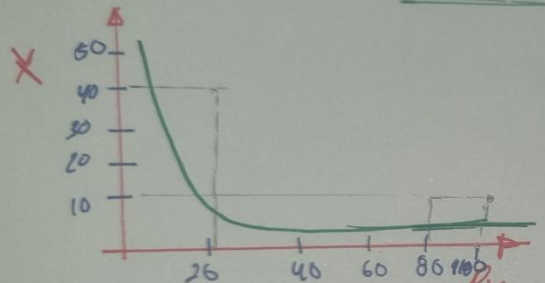


← gráfica

Curva de demanda Ordinaria X (CDO$_x$)

De la Curva Precio-Consumo de x:

$X = \frac{500}{P_x} \Rightarrow$ Demanda de X: $X(P_x) = \frac{500}{P_x}$



Curva de demanda Ordinaria de "y"

de la Curva – Precio Consumo de y

$y = \frac{500}{P_y} \rightarrow$ Demanda de "y" $Y(P_y) = \frac{500}{P_y}$